

L11 ANSWER 40 OF 71 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1991:563915 CAPLUS  
 DN 115:163915  
 ED Entered STN: 18 Oct 1991  
 TI Chromium-vanadium cast iron  
 IN Karpisonov, L. A.; Karpenko, M. I.; Marukovich, E. I.; Badyukova, S. M.; Solenova, T. I.  
 PA "Gomselmash" Industrial Enterprises, USSR  
 SO U.S.S.R.  
 From: Otkrytiya, Izobret. 1991, (6), 74.  
 CODEN: URXXAF  
 DT Patent  
 LA Russian  
 IC ICM C22C037-10  
 CC 55-3 (Ferrous Metals and Alloys)  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | SU 1627582  | A1   | 19910215 | SU 1988-4626807 | 19881227 |
| PRAI | SU 1988-4626807   |      | 19881227 |                 |          |
| AB   | Resistance to hydroabrasive wear is increased when the Cr-V cast iron contains Co 0.32-0.75, Mo 0.15-2.5, and Mg 0.02-0.06%, in addition to C 2.0-2.7, Si 0.3-0.7, Mn 0.7-1.3, Cr 2.3-7.1, Ni 0.3-1.0, V 0.2-0.7, Al 0.02-0.05, Cu 0.1-0.5, Ti 0.02-0.3, and Ce 0.02-0.06%. |      |          |                 |          |
| ST   | chromium vanadium cast iron alloying; hydroabrasion cast iron   |      |          |                 |          |
| IT   | Abrasion-resistant materials (hydro-, cast iron, microalloying of chromium-vanadium)  |      |          |                 |          |
| IT   | 7439-95-4, Magnesium, uses and miscellaneous 7439-98-7, Molybdenum, uses and miscellaneous 7440-48-4, Cobalt, uses and miscellaneous  |      |          |                 |          |
| RL:  | USES (Uses)<br>(cast iron containing, chromium-vanadium, for resistance to hydroabrasive wear)  |      |          |                 |          |
| IT   | 11097-15-7P, Cast iron, preparation   |      |          |                 |          |
| RL:  | PREP (Preparation)<br>(chromium-vanadium, microalloying of, for resistance to hydroabrasive wear)   |      |          |                 |          |
| IT   | 136330-88-6P  |      |          |                 |          |
| RL:  | PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)<br>(manufacture of, for resistance to hydroabrasive wear)   |      |          |                 |          |

L11 ANSWER 41 OF 71 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1990:427378 CAPLUS  
 DN 113:27378  
 ED Entered STN: 21 Jul 1990  
 TI Fracture toughness of cast bimetallic compositions  
 AU Chekurov, V. V.; Kudrya, A. V.; Khanzhin, V. G.  
 IS Tashkent. Politekh. Inst., Tashkent, USSR  
 SO Izvestiya Vysshikh Uchebnykh Zavedenii, Chernaya Metallurgiya (1990), (1), 76-8  
 CODEN: IVUMAX; ISSN: 0368-0797  
 DT Journal  
 LA Russian  
 IC 55-12 (Ferrous Metals and Alloys)  
 JB The fracture of bimetals of matrix 40KhL steel with a cast steel KhVG or R6M5 insert starts with the nucleation of the main crack, which is accompanied by an acoustic emission pulse of 40-50 dB recorded 0.5-1.5 s prior to the crack initiation. The optimization of casting and heat treatment parameters of the bimetallic composition ensures a 10-30% increase in the crack resistance compared to that of monolithic specimens of the structural steels studied.